IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OKLAHOMA

STATE OF OKLAHOMA,	)	
	)	
Plaintiff,	)	
	)	
v.	)	**Case No. 05-cv-329-GKF(SAJ)**
	)	
TYSON FOODS, INC., et al.,	)	
	)	
Defendants.	)	

DECLARATION OF G. DENNIS COOKE, PH.D.

I, G. Dennis Cooke, Ph.D., state the following:

1. I was retained (along with Dr.E.B.Welch) as a limnologist, to report on the past, current, and potential future conditions of Tenkiller Ferry Lake, Oklahoma, and to render opinions and conclusions about those conditions and their cause.

2. The Cooke/Welch report, "Eutrophication of Tenkiller Reservoir, Oklahoma and Effects on Water Quality and Fisheries", was submitted to the Defendants on 29 May 2008.

3. Errata were submitted by me on 1 August 2008 when it was discovered that early versions of Tables 1 and 3 of our Report had been inadvertently used in place of the final versions of the Tables when the Report was finally assembled for delivery to Defendants. Further, it was discovered that there were 9 typographical errors on pages 14, 16, 18, and 24 of our Report and those were corrected. A second Erratum was submitted by Dr. Welch on 13 August 2008 to supply a small amount of data inadvertently omitted from Appendix D of

EXHIBIT
7

our Report. The missing data, however, were in the Figures 7, 8, and 9 of our Report delivered on 29 May 2008.

4. The Errata replacement of the incorrect tables, correction of the typographical errors, and inclusion of the missing data did not alter my conclusions or my opinions. The Errata were submitted to correct small, inadvertent omissions and typographical errors.

5. Except for Figures 7.1 and 7.2 (discussed below), the tables and figures in our Report were prepared by CDM personnel. This preparation was done at my (and Dr. Welch's) request and under our direct supervision and control using our analysis. They did not draft or edit any portion of the Report.

6. Originally Dr. Jack Jones of the University of Missouri was consulted by us (Cooke/Welch) in our efforts to identify a reference reservoir in the Ozark Highlands ecoregion. Ultimately we did not choose a Missouri reservoir as a reference, but we did discuss the concept of reservoir water residence time and reservoir phosphorus concentration with Dr. Jones. Dr. Jones is perhaps the Midwest's leading expert on the relationship between water residence time and in-reservoir phosphorus concentrations. After we discussed our data with him, he volunteered to graph them for our review. We reviewed his work and these graphs ultimately became Figures 7.1 and 7.2 of our Report. Dr. Jones did not write any portion of the Report.

7. I have published approximately 70 peer-reviewed articles in the scientific literature plus several books about lake water quality. Discussion with colleagues during preparation of a book, report, or peer-reviewed article is a common, normal and completely accepted practice among scientists. It ensures access to and understanding of the latest thinking by other experts. I receive many such inquiries each year. Our discussions with Dr. Jones concerning the information in Figures 7.1 and 7.2 fall within the realm of a completely normal interaction among scientists.

8. Every word of our Report was written by Dr. Welch and me (except 5 clearly identified paragraphs on pages 39 and 40).

9. The Errata submitted by Dr. Engel on 4 September 2008 has no effect on our Report.

10. The Errata recently submitted by Dr. Wells has only a minor effect on the conclusions in our Report as follows (pages and line are references to our Report):

(a) p. 2, second line from bottom: "If poultry waste disposal continues and grows at the current rate, the model projects TP increases leading to greater eutrophic states at LK-01 ~~and LK-02~~, **LK-02** and LK-03, and hypereutrophic state at ~~LK-03~~ and LK-04".

(b) p. 35, line 9 from bottom: "At the end of a 50 year period, the trophic states of LK-01 and LK-02 will become ~~meso-~~oligotrophic, ~~whereas~~ LK-03 **will become mesotrophic** and LK-04 will ~~become~~**remain** ~~meso-eutrophic~~ hypereutrophic" (Wells Second Errata September 22, 2008).

(c) p. 35, line 2 from bottom: "The model (Wells Second Errata September 22, 2008) also predicts that trophic state at LK-01 ~~and~~, LK-02 **and LK-03** will become ~~highly~~ eutrophic (TP-TSI values of 60-~~65~~ **68**; Table 7 of this report for trophic state boundaries) by the end of the 50 year period if poultry waste disposal on the land of the watershed continues and grows at

the current rate (Engel, 2008). Under that growth scenario, conditions ~~at LK-03 and~~ **at** LK-04 will become ~~very~~ **more** hypereutrophic (TP-TSI values of ~~70-80~~ **more than 90**). These TP-TSI values **and trophic states** were computed by using the projected percent increase **or decrease** in TP concentrations at the four reservoir stations at the end of the 50 year modeling period (see Tables ~~31~~ **29** and ~~32~~ **30**; Wells Second Errata September 22, 2008)".

(d) p. 49, line 9 from top: " A model simulating changes in Tenkiller trophic state over a 50 year period following cessation of poultry waste disposal ~~on the watershed (Wells Second Errata September 22, 2008) indicated that~~ stations LK-01 and LK-02 will become ~~meso-~~oligotrophic, ~~whereas~~ LK-03 **will become mesotrophic** and LK-04 will ~~improve to meso-eutrophic states~~ **remain hypereutrophic**".

(e) p.49, line 16 from top: "If poultry waste disposal on the watershed continues and grows at the current growth rate, the model predicts that LK-01, ~~and~~ LK-02 **and LK-03** will become ~~highly~~ eutrophic ~~and LK-03~~ and LK-04 will become ~~very~~ **more** hypereutrophic by the end of the 50 year period" (Wells Second Errata September 22, 2008).

I declare under penalty of perjury, under the laws of the United States of America, that the foregoing is true and correct.

Executed on the 26 day of September, 2008.

G. Dennis Cooke, Ph.D.